

**Listing of the Claims:**

Claims 1 through 36 (cancelled).

37. (New claim) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
- (a) an amino acid sequence from residue 1 (Met) to residue 25 (Ala) of SEQ ID NO:2;
  - (b) an amino acid sequence from residue 1 (Met) to residue 52 (Trp) of SEQ ID NO:2;
  - (c) an amino acid sequence from residue 1 (Met) to residue 118 (Arg) of SEQ ID NO:2;
  - (d) an amino acid sequence from residue 1 (Met) to residue 142 (Cys) of SEQ ID NO:2;
  - (e) an amino acid sequence from residue 26 (Arg) to residue 52 (Trp) of SEQ ID NO:2;
  - (f) an amino acid sequence from residue 26 (Arg) to residue 53 (Arg) of SEQ ID NO:2;
  - (g) an amino acid sequence from residue 26 (Arg) to residue 54 (Arg) of SEQ ID NO:2;
  - (h) an amino acid sequence from residue 26 (Arg) to residue 114 (Leu) of SEQ ID NO:2;
  - (i) an amino acid sequence from residue 26 (Arg) to residue 118 (Arg) of SEQ ID NO:2;
  - (j) an amino acid sequence from residue 34 (Leu) to residue 47 (Cys) of SEQ ID NO:2;
  - (k) an amino acid sequence from residue 37 (Arg) to residue 41 (Arg) of SEQ ID NO:2;
  - (l) an amino acid sequence from residue 55 (Ser) to residue 114 (Leu) of SEQ ID NO:2;
  - (m) an amino acid sequence from residue 55 (Ser) to residue 115 (Arg) of SEQ ID NO:2;
  - (n) an amino acid sequence from residue 55 (Ser) to residue 116 (Gly) of SEQ ID NO:2;
  - (o) an amino acid sequence from residue 55 (Ser) to residue 117 (Ser) of SEQ ID NO:2;
  - (p) an amino acid sequence from residue 55 (Ser) to residue 118 (Arg) of SEQ ID NO:2;
  - (q) an amino acid sequence from residue 55 (Ser) to residue 142 (Cys) of SEQ ID NO:2;
  - (r) an amino acid sequence from residue 115 (Arg) to residue 142 (Cys) of SEQ ID NO:2;
  - (s) an amino acid sequence from residue 116 (Gly) to residue 142 (Cys) of SEQ ID NO:2;

- (t) an amino acid sequence from residue 117 (Ser) to residue 142 (Cys) of SEQ ID NO:2;
  - (u) an amino acid sequence from residue 118 (Arg) to residue 142 (Cys) of SEQ ID NO:2;
  - (v) an amino acid sequence from residue 119 (Asp) to residue 142 (Cys) of SEQ ID NO:2; and
  - (w) an amino acid sequence from residue 128 (Cys) to residue 142 (Cys) of SEQ ID NO:2.
38. (New claim) The isolated polypeptide of claim 37, further comprising an affinity tag.
39. (New claim) The isolated polypeptide of claim 38, wherein the affinity tag is selected from the group consisting of: poly-histidine tract, protein A, glutathione S transferase, Glu-Glu affinity tag, substance P, Flag peptide, streptavidin binding peptide, maltose-binding protein, and an immunoglobulin domain.
40. (New claim) An isolated polypeptide consisting of an amino acid sequence selected from the group consisting of:
- (a) an amino acid sequence from residue 1 (Met) to residue 25 (Ala) of SEQ ID NO:2;
  - (b) an amino acid sequence from residue 1 (Met) to residue 52 (Trp) of SEQ ID NO:2;
  - (c) an amino acid sequence from residue 1 (Met) to residue 118 (Arg) of SEQ ID NO:2;
  - (d) an amino acid sequence from residue 1 (Met) to residue 142 (Cys) of SEQ ID NO:2;
  - (e) an amino acid sequence from residue 26 (Arg) to residue 52 (Trp) of SEQ ID NO:2;
  - (f) an amino acid sequence from residue 26 (Arg) to residue 53 (Arg) of SEQ ID NO:2;
  - (g) an amino acid sequence from residue 26 (Arg) to residue 54 (Arg) of SEQ ID NO:2;
  - (h) an amino acid sequence from residue 26 (Arg) to residue 114 (Leu) of SEQ ID NO:2;
  - (i) an amino acid sequence from residue 26 (Arg) to residue 118 (Arg) of SEQ ID NO:2;
  - (j) an amino acid sequence from residue 34 (Leu) to residue 47 (Cys) of SEQ ID NO:2;
  - (k) an amino acid sequence from residue 37 (Arg) to residue 41 (Arg) of SEQ ID NO:2;
  - (l) an amino acid sequence from residue 55 (Ser) to residue 114 (Leu) of SEQ ID NO:2;

Response to the December 19, 2002 Office Action

- (m) an amino acid sequence from residue 55 (Ser) to residue 115 (Arg) of SEQ ID NO:2;
  - (n) an amino acid sequence from residue 55 (Ser) to residue 116 (Gly) of SEQ ID NO:2;
  - (o) an amino acid sequence from residue 55 (Ser) to residue 117 (Ser) of SEQ ID NO:2;
  - (p) an amino acid sequence from residue 55 (Ser) to residue 118 (Arg) of SEQ ID NO:2;
  - (q) an amino acid sequence from residue 55 (Ser) to residue 142 (Cys) of SEQ ID NO:2;
  - (r) an amino acid sequence from residue 115 (Arg) to residue 142 (Cys) of SEQ ID NO:2;
  - (s) an amino acid sequence from residue 116 (Gly) to residue 142 (Cys) of SEQ ID NO:2;
  - (t) an amino acid sequence from residue 117 (Ser) to residue 142 (Cys) of SEQ ID NO:2;
  - (u) an amino acid sequence from residue 118 (Arg) to residue 142 (Cys) of SEQ ID NO:2;
  - (v) an amino acid sequence from residue 119 (Asp) to residue 142 (Cys) of SEQ ID NO:2; and
  - (w) an amino acid sequence from residue 128(Cys) to residue 142 (Cys) of SEQ ID NO:2.
41. (New claim) An isolated polypeptide comprising SEQ ID NO:2.
42. (New claim) The isolated polypeptide of claim 41, further comprising an affinity tag.
43. (New claim) The isolated polypeptide of claim 42, wherein the affinity tag is selected from the group consisting of: poly-histidine tract, protein A, glutathione S transferase, Glu-Glu affinity tag, substance P, Flag peptide, streptavidin binding peptide, maltose-binding protein, and an immunoglobulin domain.
44. (New claim) An isolated polypeptide consisting of SEQ ID NO:2.
45. (New claim) An isolated polypeptide comprising:
- (a) a B chain comprising amino acid sequence selected from the group consisting of:

Response to the December 19, 2002 Office Action

- (i) an amino acid sequence from residue 26 (Arg) to residue 52 (Trp) of SEQ ID NO:2,
  - (ii) an amino acid sequence from residue 26 (Arg) to residue 53 (Arg) of SEQ ID NO:2,
  - (iii) an amino acid sequence from residue 26 (Arg) to residue 54 (Arg) of SEQ ID NO:2,
  - (iv) an amino acid sequence from residue 34 (Leu) to residue 47 (Cys) of SEQ ID NO:2, and
  - (v) an amino acid sequence from residue 37 (Arg) to residue 41 (Arg) of SEQ ID NO:2; and
- (b) a C peptide comprising an amino acid sequence selected from the group consisting of:
- (i) an amino acid sequence from residue 55 (Ser) to residue 114 (Leu) of SEQ ID NO:2,
  - (ii) an amino acid sequence from residue 55 (Ser) to residue 115 (Arg) of SEQ ID NO:2,
  - (iii) an amino acid sequence from residue 55 (Ser) to residue 116 (Gly) of SEQ ID NO:2,
  - (iv) an amino acid sequence from residue 55 (Ser) to residue 117 (Ser) of SEQ ID NO:2, and
  - (v) an amino acid sequence from residue 55 (Ser) to residue 118 (Arg) of SEQ ID NO:2; and
- (c) an A chain comprising an amino acid sequence selected from the group consisting of:
- (i) an amino acid sequence from residue 115 (Arg) to residue 142 (Cys) of SEQ ID NO:2,
  - (ii) an amino acid sequence from residue 116 (Gly) to residue 142 (Cys) of SEQ ID NO:2,
  - (iii) an amino acid sequence from residue 117 (Ser) to residue 142 (Cys) of SEQ ID NO:2,
  - (iv) an amino acid sequence from residue 118 (Arg) to residue 142 (Cys) of SEQ ID NO:2,

Response to the December 19, 2002 Office Action

- (v) an amino acid sequence from residue 119 (Asp) to residue 142 (Cys) of SEQ ID NO:2, and
- (vi) an amino acid sequence from residue 128(Cys) to residue 142 (Cys) of SEQ ID NO:2,

wherein the B chain, C peptide and A chain are joined by inter- and intra-chain disulfide bonds.

- 46. (New claim) The isolated polypeptide of claim 45, wherein the B chain comprises an amino acid sequence from residue 26 (Arg) to residue 52 (Trp) of SEQ ID NO:2, the C peptide comprises an amino acid sequence from residue 55 (Ser) to residue 114 (Leu) of SEQ ID NO:2, and the A chain comprises an amino acid sequence from residue 119 (Asp) to residue 142 (Cys) of SEQ ID NO:2.
- 47. (New claim) The isolated polypeptide of claim 45, further comprising an affinity tag.
- 48. (New claim) The isolated polypeptide of claim 47, wherein said affinity tag is selected from the group consisting of: poly-histidine tract, protein A, glutathione S transferase, Glu-Glu affinity tag, substance P, Flag peptide, streptavidin binding peptide, maltose-binding protein, and an immunoglobulin domain.
- 49. (New claim) An isolated polypeptide comprising:
  - (a) a B chain comprising amino acid sequence selected from the group consisting of:
    - (i) an amino acid sequence from residue 26 (Arg) to residue 52 (Trp) of SEQ ID NO:2,
    - (ii) an amino acid sequence from residue 26 (Arg) to residue 53 (Arg) of SEQ ID NO:2,
    - (iii) an amino acid sequence from residue 26 (Arg) to residue 54 (Arg) of SEQ ID NO:2,
    - (iv) an amino acid sequence from residue 34 (Leu) to residue 47 (Cys) of SEQ ID NO:2, and
    - (v) an amino acid sequence from residue 37 (Arg) to residue 41 (Arg) of SEQ ID NO:2; and

- (b) an A chain comprising an amino acid sequence selected from the group consisting of:
- (i) an amino acid sequence from residue 115 (Arg) to residue 142 (Cys) of SEQ ID NO:2,
  - (ii) an amino acid sequence from residue 116 (Gly) to residue 142 (Cys) of SEQ ID NO:2,
  - (iii) an amino acid sequence from residue 117 (Ser) to residue 142 (Cys) of SEQ ID NO:2,
  - (iv) an amino acid sequence from residue 118 (Arg) to residue 142 (Cys) of SEQ ID NO:2,
  - (v) an amino acid sequence from residue 119 (Asp) to residue 142 (Cys) of SEQ ID NO:2, and
  - (vi) an amino acid sequence from residue 128(Cys) to residue 142 (Cys) of SEQ ID NO:2,

wherein the B chain and A chain are joined by inter- and intra-chain disulfide bonds.

50. (New claim) The isolated protein of claim 49, wherein the B chain comprises an amino acid sequence from residue 26 (Arg) to residue 52 (Trp) of SEQ ID NO:2, and the A chain comprises an amino acid sequence from residue 119 (Asp) to residue 142 (Cys) of SEQ ID NO:2.
51. (New claim) The isolated protein of claim 45, further comprising an affinity tag.
52. (New claim) The isolated protein of claim 51, wherein said affinity tag is selected from the group consisting of: poly-histidine tract, protein A, glutathione S transferase, Glu-Glu affinity tag, substance P, Flag peptide, streptavidin binding peptide, maltose-binding protein, and an immunoglobulin domain.
53. (New claim) A composition, comprising a pharmaceutically acceptable carrier and a polypeptide of claim 37.
54. (New claim) A composition, comprising a pharmaceutically acceptable carrier and a polypeptide of claim 41.

55. (New claim) A composition, comprising a pharmaceutically acceptable carrier and a polypeptide of claim 45.
56. (New claim) A composition, comprising a pharmaceutically acceptable carrier and a polypeptide of claim 49.